

Item #13: Change In Elk Summer Habitat

Evaluation Objectives: To evaluate the relationship between changes in important elk summer habitats, elk populations, and whether these changes are a result of forest management practices.

Methods: Habitat effectiveness of elk summer range considers cover provided by vegetation and human impacts related to access. Habitat effectiveness values can range from 0.0 to 1.0, with higher values indicating better elk habitat conditions. Elk habitat effectiveness calculations were made for most of the forest in early 1993. Habitat effectiveness can be used as an estimator of elk habitat quality resulting from implementation of the Forest Plan at the project level.

Evaluation: Elk habitat effectiveness was calculated for 2,330,598 acres in early 1993, which included some non-forest ownership primarily in the Swan Valley. Calculations are grouped by ranger district, which generally indicates the major Flathead River Drainage areas. The following table displays results of these calculations.

Table 13-1. 1993 Elk Habitat Effectiveness

District	Total acres	Number of habitat analysis areas	Effectiveness average	Range
Glacier View	231,723	35	.57	0.3 to 1.0
Hungry Horse	327,751	51	.70	0.4 to 1.0
Spotted Bear	1,037,011	106	.89	0.4 to 1.0
Swan Island Unit	68,612	20	.23	0.0 to 0.5
Swan Lake	468,187	61	.66	0.3 to 1.0
Tally Lake	197,314	26	.43	0.2 to 0.7

Although forest-wide values have not been recalculated since 1993, it is expected that improvements in elk habitat effectiveness would occur in most areas due to habitat improvement projects, fewer open roads and greater acreage of secure habitat from access management decisions that limit motorized use. Project level effects analyses incorporate the elk habitat effectiveness models.

The habitat improvement program is intended to help maintain habitat productivity and help mitigate effects to wildlife or habitat from other forest uses. By 1995, the Flathead National Forest had an open road density of about 0.5 miles per mi² (approx. 1836 miles/3688 mi²). From 1995 through 2007, about 566 miles total miles of system road was decommissioned and the miles of road open with no restrictions decreased by about 330 miles. Additional seasonal and yearlong restrictions to existing system roads have also occurred during this time period. By 2007 the open road density had decreased to about 0.4 miles per mi² (approx. 1487 miles/3688 mi²).

Both of these actions have provided for thousands of acres of additional security habitat conditions for wildlife. Security core acreage improved primarily for grizzly bear habitat has increased by over 128,000 acres (Table 13-2). Over 24,000 acres of summer and winter habitat

have also been improved primarily through prescribed burning since 1998. This is an increase from the previous reporting period and much larger amount than forecasted forest plan accomplishments.

Table 13-2. Existing Grizzly Bear Security Core on the Flathead National Forest

	1995		2007	
	Acres of Core	% Core	Acres of Core	% Core
70 GB Subunits, 2,223,677 ac	1,401,926	63	1,530,653	69

Project level analyses occur at the project level based on estimated outcomes of effects on the elk management areas affected by the project. Habitat effectiveness or quality for elk and mule deer summer habitat emphasize moist sites and security areas. Most wet areas are protected because management activities within a Riparian Habitat Conservation Area (RHCA) are limited except for restoration of degraded conditions due to a catastrophe or are needed in order to achieve desired vegetation characteristics to attain Riparian Management Objectives. Security areas or open motorized road densities are achieved in much of the forest with maintenance or improved conditions for grizzly bear habitat quality, and maintenance of geographical area road density standards outside of the grizzly bear recovery zone.

Recommended Action: A surrogate for elk habitat quality would be continued improvement in access management conditions that result in fewer open roads and larger areas of security habitat (A-19 Grizzly Bear standards), and diversity of vegetative age classes on the landscape (acres of habitat improvement) both of which are reported elsewhere.